

**METHODS AND SYSTEMS FOR UPDATING AND RECOVERING FIRMWARE
WITHIN A COMPUTING DEVICE OVER A DISTRIBUTED NETWORK**

Abstract

5 Methods and systems are provided for updating and recovering firmware within
computers over a distributed network. While a computer is in an operating system
independent state, a determination is made as to whether the firmware within the
computer is valid. The firmware may be the BIOS for the computer. If it is determined
that the current firmware is invalid, a recovery request is sent to a manager computer
10 monitoring for recovery requests. The manager computer sends a new firmware image
over the network to the computer. The invalid firmware is then updated with the new
firmware image. An instruction to update the firmware of the computer may also be sent
from a manager computer to computers monitoring for instructions. When the instruction
is received, the computer transitions to an operating system independent recovery state,
15 receives a new firmware image over the network, and updates with the new firmware
image.